

Condorette HP Z600 Windows 7 64-bit Prime95 V29.4 64-bit dual 6-core X5650 Xeon background for 1 week, month, or year runtime thresholds

Prime95 benchmark output, system throughput, iter/sec (more is better for a given fft length)

# of cores per worker	Straddles chips? →						max throughput	1 of 3 workers						Prime95 v30.4b8 approx max exponent	bits/word	Estimated latency 1-worker days
	12	6	4	3	2	1		yes	no	no	no	no	no			
# of workers	1	2	3	4	6	12	1 worker	2-workers	3 workers	4 workers	6 workers	12 workers				
FFT length K																
2048	<u>255.4</u>	284.71	289.15	296.2	300.19	<b>310.62</b>	310.62	17.78%	8.34%	6.91%	4.64%	3.36%	0.00%	39530000	18.849	1.791
...																
3584	<u>131.33</u>	153.48	153.04	<b>159.73</b>	152.31	151.68	159.73	17.78%	3.91%	4.19%	0.00%	4.65%	5.04%	68490000	18.662	6.036
3840	<u>124.21</u>	146.88	134.08	128.44	<b>150.93</b>	139.63	150.93	17.70%	2.68%	11.16%	14.90%	0.00%	7.49%	73180000	18.611	6.819
4096	<u>112.67</u>	129.52	129.79	128.71	<b>133.98</b>	127.51	133.98	15.91%	3.33%	3.13%	3.93%	0.00%	4.83%	77990000	18.594	<b>8.012</b>
4480	<u>101.72</u>	<b>120.93</b>	110.94	114.60	117.46	115.28	120.93	15.89%	<b>0.00%</b>	8.26%	5.23%	2.87%	4.67%	85200000	18.572	9.694
4608	<u>98.27</u>	104.8	104.77	104.22	<b>113.19</b>	109.9	113.19	13.18%	7.41%	7.44%	7.92%	0.00%	2.91%	87400000	18.522	10.294
4800	<u>93.79</u>	<b>107.39</b>	97.41	104.29	102.56	101.89	107.39	12.66%	0.00%	9.29%	2.89%	4.50%	5.12%	91020000	18.518	11.232
5120	<u>88.18</u>	<b>102.86</b>	97.00	91.49	99.35	96.59	102.86	14.27%	0.00%	5.70%	11.05%	3.41%	6.10%	97020000	18.505	12.734
5376	<u>79.09</u>	<b>91.29</b>	88.37	90.71	85.42	89.03	91.29	13.36%	0.00%	3.20%	0.64%	6.43%	2.48%	101700000	18.474	14.883
5600	<u>73.25</u>	82.55	79.39	<b>86.48</b>	83.12	86.25	86.48	15.30%	4.54%	8.20%	0.00%	3.89%	0.27%	105900000	18.467	16.733
5760	<u>75.00</u>	79.24	84.19	83.33	<b>86.38</b>	80.64	86.38	13.17%	8.27%	2.54%	3.53%	0.00%	6.65%	108700000	18.429	16.775
6144	<u>68.84</u>	76.92	73.69	75.1	<b>77.47</b>	72.26	77.47	11.14%	0.71%	4.88%	3.06%	0.00%	6.73%	115800000	18.406	19.469
6400	<u>67.77</u>	<b>76.04</b>	70.54	72.27	72.39	72.38	76.04	10.88%	0.00%	7.23%	4.96%	4.80%	4.81%	120500000	18.387	20.580
6720	<u>60.76</u>	65.97	62.94	63.61	64.79	<b>67.17</b>	67.17	9.54%	1.79%	6.30%	5.30%	3.54%	0.00%	126400000	18.369	24.078
6912	<u>51.36</u>	55	54.98	55.35	55.76	<b>57.16</b>	57.16	10.15%	3.78%	3.81%	3.17%	2.45%	0.00%	129700000	18.325	29.228
7168	<u>44.82</u>	50.59	51.90	52.86	52.66	<b>54.11</b>	54.11	17.17%	6.51%	4.08%	2.31%	2.68%	0.00%	134800000	18.365	<b>34.810</b>
7680	<u>52.22</u>	<b>57.08</b>	55.99	54.68	56.83	56.00	57.08	8.51%	0.00%	1.91%	4.20%	0.44%	1.89%	144000000	18.311	31.916
8000	<u>47.91</u>	53.78	53.55	53.71	54.42	<b>55.27</b>	55.27	13.32%	2.70%	3.11%	2.82%	1.54%	0.00%	149900000	18.298	36.213
8192	<u>47.16</u>	<b>51.75</b>	51.41	51.17	51.03	51.72	51.75	8.87%	0.00%	0.66%	1.12%	1.39%	0.06%	153300000	18.275	37.623
...																
10240	<u>37.43</u>	38.64	39.29	39.75	<b>39.82</b>	39.66	39.82	6.00%	2.96%	1.33%	0.18%	0.00%	0.40%	190600000	18.177	58.937
...																
12288	<u>26.36</u>	27.90	28.82	29.11	<b>29.57</b>	29.43	29.57	10.86%	5.65%	2.54%	1.56%	0.00%	0.47%	228400000	18.152	100.285
...																
14336	<u>22.54</u>	<b>24.72</b>	25.19	24.52	25.64	25.14	25.64	12.09%	3.59%	1.76%	4.37%	0.00%	1.95%	265600000	18.093	136.383
...																
16384	<u>15.37</u>	18.47	18.55	<b>19.03</b>	18.64	18.91	19.03	19.23%	2.94%	2.52%	0.00%	2.05%	0.63%	302400000	18.024	227.716
# fastest	0	<b>8</b>	0	3	7	5	min	6.00%	0.00%	0.66%	0.00%	0.00%	0.00%			
# slowest	<b>23</b>	0	0	0	0	0	average	<b>13.25%</b>	3.00%	4.79%	3.82%	<b>2.09%</b>	2.72%			
							max	19.23%	8.34%	11.16%	14.90%	6.43%	7.49%			

Dual 6-core X5650 Prime95 V29.4b7

Performance penalty vs fft length specific optimum

